

Operational Art in the Defense: The German “Abwehrschlachten” in 1918

**A Monograph
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Abstract

OPERATIONAL ART IN THE DEFENSE: THE GERMAN “ABWEHRSCHLACHTEN” IN 1918 by MAJ (GS) Frank Reiser, 45 pages.

The stalemate in World War I created the need for a solution to escape this resource intense form of warfare. Following five unsuccessful German offenses in early 1918, the Germans found themselves in a solely defensive scenario conducting defensive battles, named "Abwehrschlachten."

Based on the findings of previous research on these offensives, the monograph analyzes German operational thinking and the display of operational art in the subsequent defensive scenario from the last unsuccessful offensive in July 1918 to the armistice in November 1918.

The paper relies on two approaches. First, it analyzes data from primary sources to identify changes in the strategic context from a German perspective, by using a model from Collin S. Gray, and derives implications for the German ability to apply operational art. Second, it reflects German military actions during the "Abwehrschlachten" upon a framework of operational elements, derived from the previous case study of David T. Zabecki on the German offensives.

The analysis results in a confirmation of previous findings about the level of German operational thinking at that time, but also depicts the limitations the Germans faced in their attempts to apply their thinking through military action. Those limitations predominately emerged from significant changes in the operational environment in 1918. Current consensus, in line with Clausewitz's thoughts on the defense, is that the defense, tied to a negative aim, is a temporary form of warfare and military leaders always strive to seize the initiative to transit to the offensive form of war-fighting, tied to a positive aim. Based on the analysis of this solely defensive scenario from a German perspective, the monograph questions the applicability of today's understanding of operational art in such a purely defensive scenario and suggest the evolution towards a framework for operational art in the defense.

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Introduction

I wrote in my diary:

It was a dimmer fall morning at the beginning of the last quarter of the memorable year 1918. It will not be a year of “salvation,” I am afraid, for us Germans, not even of inner sanctification. Disunity, the old German bad habit, is visible everywhere; political blindness, an externally orientated exaggerated cosmopolitanism, internal factionalism captivate huge masses and thousands of thinking heads. [...] The army could not keep itself away from these subversive influences. Fine words, an abundance of decorations, and encouragements of all kind came too late.¹

Max von Gallwitz, *Experience in the West 1916-1918*

With this entry in his personal war diary, written down in early October 1918, the German general Max von Gallwitz provided us his assessment and his outlook on the last few months of World War I (WWI). Just a few months prior, in the spring of 1918, German forces achieved limited success over the conduct of multiple offensive operations and hopes were high that Germany still could achieve victory over its enemies, but German commanders were unable to exploit this tactical success on an operational level. German forces culminated in their struggle to break the stalemate and re-establish maneuver centric warfare, and as a result, they transitioned to the conduct of “Abwehrschlachten” (defensive battles) against the advancing Allies, who seized the initiative. This period of the “Abwehrschlachten,” from a German operational level perspective, is the subject of this monograph. To exemplify the defensive battle, the author uses actions of the German Army Group Gallwitz, who defended against the offensive campaign fought by the American Expeditionary Force (AEF) from September to November 1918 in the Meuse-Argonne sector of France.

The tendency of viewing WWI from the perspective of the offense characterizes the historical understanding of, not only the Meuse-Argonne campaign but, also almost the entire

¹ Max von Gallwitz, *Erleben im Westen 1916-1918* (Berlin: E.G. Mittler & Sohn, 1932), 399: Ich schrieb in mein Tagebuch: „Ein trüber Herbstmorgen zu Beginn des letzten Vierteljahres im denkwürdigen Jahre 1918. Ein Jahr des „Heiles“ wird es, fürchte ich, für uns Deutsche nicht werden, nicht einmal der inneren Heiligung. Zerrissenheit, die alte deutsche Untugend, zeigt sich aller Orten; die politische Blindheit, ein übertriebenes Weltbürgertum nach außen, der Parteiengeist im Inneren halten große Massen und tausende der denkenden Köpfe gefangen. [...] Das Heer konnte von zersetzenden Einflüssen nicht frei bleiben. Schöne Worte, Orden in Hülle und Fülle und Aufmunterungen aller Art kommen zu spät.“

year of 1918. Besides the operational level case study of the German offensives in 1918 from David T. Zabecki, American literature about this period focuses predominately on Allied offensive operations from the perspective of the AEF. German WWI literature focuses predominately on political circumstances and social implications of the war rather than the analysis of battles or campaigns from an operational perspective.

A historical understanding of the German operational approach in the defense in which they countered the Allied offensive adds significantly to the overall knowledge of the Allied campaign in the Meuse-Argonne sector. By including an analysis of the German operational approach after culmination and transition to the defensive “Abwehrschlachten,” the monograph provides detail for a more holistic perspective on the Allied campaign. Additionally, it develops an understanding of how the strategic context of Germany in the second half of 1918 influenced the application of operational art and the way the Germans thought, and enhances the overall understanding of the relationship between strategic context and operational art in a defensive scenario.

How did the Germans show operational level thinking and apply operational art during their purely defensive orientated “Abwehrschlachten,” after the transition from the unsuccessful spring offensives, and which were the limiting factors in their struggle to counter the offensive operations of the Allies in 1918?

Based on a comprehensive operational level case study of the previous German offensives in 1918 by David T. Zabecki, this paper applies Zabecki’s analytic framework to the subsequent German defensive operations from August to the armistice in November 1918. According to Zabecki, the Germans thought operationally and displayed operational art during their spring offensives. The monograph analyzes the context of the “Abwehrschlachten” and the German defensive actions. It builds a case that despite their ability to think operationally in the offensive, the Germans lacked the ability to apply operational art to the same extent in the defense. The main reasons were limitations placed on the forces, which emerged from the

significant changes in the strategic context in the second half of 1918. Those changes prevented the Germans from achieving the goals of a defense – to put oneself in a position of advantage from which the initiative can be seized and own forces transit to decisive, offensive operations again.²

To support the analysis, the author uses the concept of operational from the United States Army Field Manual (FM) 3-0, *Operations*, Change 1, published in February 2011, to explain the elements of operational art depicted in the “Abwehrschlachten.” The analysis describes the manner in which the Germans thought operationally and displayed operational art during the conduct of the “Abwehrschlachten.” The research relies on a number of primary German sources including battle and field reports, writings of officers who served in WWI as well as political leaders of that time. In addition, the author looked at primary American sources generated by the AEF, and other contemporary secondary sources, predominately about the campaign of the AEF, but also ones with a more general view on WWI.

After describing the development towards, and the conduct of the “Abwehrschlachten” through a literature review, the monograph will analyze the strategic context from a German viewpoint after the culmination of German forces in September 1918 – a result of the unsuccessful conduct of the German offensives. Changes in the strategic context played an important role in determining the level to which the Germans applied operational art in a purely defensive scenario. To support that analysis, the author uses a framework, described by Collin S. Gray’s in his book *War, Peace, and International Relations*. Gray asserts that context is vital to the understanding of wars. He further elaborates that the context in which wars happen comprises the political, the socio-cultural, the economic, technological, military-strategic, geographical, and

² Carl von Clausewitz, *On War*, Michael Howard und Peter Paret ed. and trans. (New Jersey: Princeton University Press, 1989), 357-359.

the historical aspects of war.³ In the main part of this monograph, the author explores the evolution of German military thinking and reflects the findings on the “Abwehrschlachten.” Using a modification of Zabecki’s framework of the operational art, the monograph includes the evolution of German military theory and operational thinking. The author will do this by assessing the actions of the Germans in the defense to determine to what extent the “Abwehrschlachten” displayed operational art. A biographical review of General Max von Gallwitz, commanding general of the German Army Group Gallwitz, who opposed the AEF, provides additional insight in operational thinking on the German actions from the perspective of its senior commander.

To that end, the author will progress systematically through this framework with respect to the German “Abwehrschlachten” against the AEF’s offensive campaign in the Meuse-Argonne sector in 1918. These findings, combined with the analysis of the context of strategic history, allow the author to describe the extent to which the actions within the “Abwehrschlachten” displayed operational art or to explain why not. Based on the findings of the analysis of the approach of the German forces opposing the AEF in the Meuse-Argonne sector, the monograph will describe the overall approach to the Allied fall offensive from an operational level perspective.

Establishing a Terminology

For the purpose of this monograph, some terms relevant to the discussion of the operational level of war, especially operational art, require some definition. In his case study, published in 2006, Zabecki claimed that there is no single authoritative listing of the elements and components of operational art. Therefore, he assembled a list of seven elements of operational art

³ Colin S. Gray, *War, Peace and International Relations - An Introduction to Strategic History* (New York: Routledge, 2007), 10.

and five elements of operational power. Those elements were almost identical with the listings in FM 3-0, Ch. 1, published two years after Zabecki's book. Even though the recently published United States Army Doctrinal Publication (ADP) 3-0, *Unified Land Operations*, supersedes FM 3-0, it still provides a solid foundation for definitions.

Operational art, according to FM 3-0, requires a holistic understanding of the problem and the operational environment. Commanders and their staff apply creative imagination "to design strategies, campaigns, and major operations and organize and employ military forces" by integrating ends, ways, and means from the tactical to the strategic level of war.⁴ Furthermore, the purpose of operational art is to facilitate a two-way communication between the tactical and the strategic level. It thereby ensures that strategy (ends) is executable with respect to the resources available (means) and tactical capabilities of a force (ways) and places tactical actions into a framework geared towards a common goal, because otherwise the tactical action would be nothing else than senseless violence.⁵ To ensure a unifying purpose as a basis for that two-way communication, commanders use the eleven elements of operational art as described in FM 3-0 Ch.1⁶. This not only helps commanders to understand the problem and the environment, but also enables them to visualize how they intend to employ combat power through tactical actions, geared towards a strategic aim.⁷ This has much in common with the German understanding of the term operation prior to WWI. German military leaders defined an operation as the control of

⁴ Headquarters Department of the Army, *FM 3-0 Operations*, 7-1.

⁵ Justin Kelly and Michael J. Brennan, "The Leavenworth Heresy and the Perversion of Operational Art" in *JFQ Issue 56* (1st Quarter 2010), 110.

⁶ Headquarters Department of the Army, *FM 3-0 Operations*, 7-25 to 7-92: The eleven elements of operational art are End State and Conditions, Centers of Gravity, Direct or Indirect Approach, Decisive Points, Lines of Operations/ Effort, Operational Reach, Tempo, Simultaneity and Depth, Phasing and Transitions, Culmination, and Risk.

⁷ Ibid., 4-12 to 4-53: The six warfighting functions are Mission Command, Movement and Maneuver, Intelligence, Fires, Sustainment, and Protection; see also FM 3-0 Ch.1, 7-25.

forces to achieve tasks that they derived from strategic plans, including the preparation, conduct, and sequencing of battles.⁸

Distinct from the operational art, the focus of operational thinking relies on the individual person and his ability to grasp, understand, and articulate the challenges that arise from gaps between tactical actions and strategic guidance in a large-scale conflict, spread over time as well as space. This requires the ability to zoom out and shift the focus away from single tactical actions to the linkage of those actions with respect to time and space aimed at a common end state. By doing so, one must be aware not to be too broad and hereby just repeat the strategy given in other terms.

For the purpose of analysis and assessment of operational art and thinking of German leaders during the “Abwehrschlachten” against the AEF, the author uses Zabecki’s elements of operational design (center of gravity; decisive points; culmination; lines of operation; depth; timing; tempo and sequencing; and reach). Zabecki built this framework to analyze offensive operations, therefore the analysis of the German defensive operations in this monograph must assess first, if and then how each of the elements is applicable to the defensive scenario of the “Abwehrschlachten.”

The Way to the German “Abwehrschlachten”

A German “Schützengrabengedicht” (trench poem), named “From the Trenches: The Brothers,” written during the early WWI, begins with the line: “Man disappeared in the large army; the army disappeared in the soil.”⁹ This epitomizes in broad strokes the realization of the outcome of the Battle of the Marne in 1914 and the new stage of warfare the world was about to enter. The Germans were not able to achieve a decisive victory, which led to the onset of trench

⁸ Horst Boog, *Operatives Denken und Handeln in deutschen Streitkräften im 19. und 20. Jahrhundert* (Herford: E.S. Mittler & Sohn GmbH, 1988), 45.

⁹ Leo Sternberg, “Gott hämmert ein Volk“ in *Kriegsdichtungen* (Berlin: Behr, 1916), 40: “Der Mensch ist untergegangen in dem großen Heer; das Heer in der Erde verschwunden...”

warfare in the west. Innovations led to improved trenches and barbed wire fortifications, rapid-fire artillery and machine guns, which took away mobility from the battlefields.¹⁰ All sides tried to break the ongoing stalemate and reestablish maneuver warfare by employing new weapons' technology, pursuing new doctrinal ideas, or a combination of both. Shortly after the outbreak of WWI, military leaders on all sides realized the impact of the advanced weapons available at that time on their tactics. The increased firepower and accuracy led to increased lethality of rifles, machine guns, and artillery, which allowed defenders to defeat almost any attack. Attempts to overcome the advantage of the defense by massive attacks of so far unseen scale resulted in bleeding the enemy white on a strategic level causing horrible losses without gaining decisive success. After the Battle of the Marne in 1914, the adversaries found themselves digging in deep into the earth and racing to envelop the enemy's trenches on the flanks. This led to trench warfare from the Alps in the South to the coast at the English Channel in the North and ultimately to a stalemate on the Western front. For almost four years, this situation characterized and resulted in the longest and bloodiest war of position in history.¹¹

Gaining the Initiative – The German 1918 Offensives

Before March 1918, none of the war parties had achieved significant and sustainable success in solving the problem of trench warfare through strategy of attrition. The Germans launched offensive operations, based on a combination of innovative use of artillery and specially trained assault infantry, the "Sturmtruppen." On 21 March 1918, the Germans conducted their first offensive, Operation Michel, and achieved a penetration of about 80km in width and a depth of 65km. The operation stalled on the sixth day and the Germans failed to turn the initial tactical success into an operational advantage. The Germans executed four subsequent offensive

¹⁰ Robert M. Citino, *The German Way of War* (Lawrence: University Press of Kansas, 2005), 223.

¹¹ Spencer Tucker and Priscilla Mary Roberts, *World War I: A Student Encyclopedia* (Santa Barbara: ABC-CLIO, Inc., 2006), 21-23.

operations, the last one in mid-July, and they all failed to achieve decisive victories. In retrospect, causes for the German lack of success included decisions to reinforce unsuccessful troops that encountered strong enemy resistance rather than exploiting tactical achievements in other locations to reach success on the operational level. The penetration itself was the objective for the German offensive plans. The German Army Supreme Command, “Oberste Heeresleitung” (OHL), did not plan for branches or sequels addressing the opportunities given a penetration of the enemy’s defensive positions.¹² Furthermore, Allied tactics evolved from a static to a mobile orientated defense to counter the German penetration tactics more effectively. After this series of offensives, Germany lacked the resources to conduct further attacks and the force ratio became a German disadvantage, due to the massive build-up of the AEF. German Crown Prince Rupprecht expressed his concern in mid-August 1918 that “The Americans are multiplying in a way we never dreamt of,” and Ludendorff made the factual statement that Germany “cannot fight against the entire world.”¹³ With the launch of the Allied Meuse-Argonne-Offensive on September 26 in 1918, the German forces ultimately lost the initiative and they had to conduct a series of “Abwehrschlachten.”

Culmination – The Allied Advance

Most historical reviews depict the Allied Meuse-Argonne-Offensive as a three-phased operation. This is consistent with a description General Pershing provided in his final report after WWI, in which he named the period from September 26 to October 3 as Phase I, Phase II started on October 4 and lasted until October 31, and the Phase III comprised the period from November 1 to 11.¹⁴

¹² Liddell Hart, *The Real War, 1914-1918* (Boston: Brown Little, 1930), 370-374.

¹³ Robert B. Asprey, *The German High Command at War* (New York: W. Morrow, 1991), 459.

¹⁴ Gen. John J. Pershing, *Final Report of Gen. John J. Pershing, Commander-In-Chief American Expeditionary Forces* (Washington: Government Printing Office, 1920), 45.

Within the first two days of Phase I, the AEF penetrated 11km deep into the center of the German network of defenses and seized Montfaucon d'Argonne. Pershing saw the establishment of the AEF's lines of communications after his forces crossed the *no man's land* as the decisive element during the first days of the operation. This was paramount for the advance of his artillery, which was necessary to support the attacking infantry. The AEF accomplished its mission by the end of September 27.¹⁵

The purpose of Phase II was to renew the attack and to drive the Germans from the heights east of the Meuse. By the end of the day, on October 7, the AEF had advanced an additional 6km, after encountering heavy German defenses. The Germans defended fiercely to gain time for the withdrawal of their troops from northern France further to the east, before the AEF could cut their lines of communication. Despite continuous fighting along the front line, the AEF launched another attack on October 14 and penetrated the Hindenburg Line, which was a system of linked fortified areas running from the North Sea to the area around Verdun in the middle of France. At the end of the phase, the AEF had forced the Germans to introduce a significant number of reserves (15 divisions) without being able to prevent an overall advance of the AEF of 21km.¹⁶

Phase III began with a two-hour artillery preparation and a subsequent infantry attack, which resulted in a 9km advance on November 1. The AEF penetrated the last German defensive line and captured the enemy's artillery positions. German forces retreated to avoid isolation. Afterwards, Allied forces proceeded more easily towards Sedan and crossed the Meuse. On November 7, the area seized by the AEF extended 10km east of the Meuse River and Pershing's forces controlled the heights dominating Sedan, the ultimate objective of the operation. Shortly

¹⁵ Ibid., 46-47.

¹⁶ Ibid., 47-50.

before the armistice on November 11, the AEF maintained complete control of the Meuse River line.¹⁷

In his operational level case study of these offensives, Zabecki concluded that the Germans showed through the conduct of their 1918 offensives that they had a clear understanding of the distinction between tactics and strategy and acknowledged the existence of the operational level in-between the two. By that time, Zabecki asserts, the Germans had a better grasp on operational thinking than any of their opponents. German army commanders fighting in the Meuse-Argonne sector grasped concepts like centers of gravity, decisive points, culmination, lines of operation, timing, and sequencing. They also had a good understanding of maneuver and deception at the operational level of war, and especially used operational fires in preparation of attacks. Furthermore, they started to learn about the operational implications of the concepts of depth and reach, as well as the importance of operational level intelligence and sustainment. In the interwar period, the Germans further developed those concepts, culminating in the military concepts and doctrines used by the Wehrmacht in World War II.¹⁸

Units, Individuals, and Their Role

Two large military formations and their commanders on the American and the German side are central to the German “Abwehrschlachten.” On the Allied side, the AEF, under the command of General John J. Pershing, entered the European continent in 1917 to join the fight against Germany. At first, the AEF supported the Allied defenses against ongoing German offensive operations during the spring and summer of 1918 and then they transitioned into successful offensive operations later in the year. In his book *The AEF Way of War*, considered among historians to be one of the most comprehensive and extensively researched examinations

¹⁷ Ibid., 50-53.

¹⁸ David T. Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War* (New York: Routledge, 2006), 39-40.

of the AEF, Major Grotelueschen, an United States Army active duty officer and Assistant Professor at the United States Air Force Academy asserts that the AEF offensive in the Meuse-Argonne sector was “one of the greatest military campaigns ever fought by American forces.”¹⁹ On 1 February 1918, the Germans formed a new Army Group around Verdun consisting of the German V. Army and the Army Section C under the command of the General of Artillery Max von Gallwitz.²⁰ Just a couple of days later, this Army Group faced the AEF and captured the first American prisoners of war (POW) from the AEF’s 1st Division. After the main Allied offensive started on 12 September 1918, the Army Group Gallwitz began to fall back to the “Michel Stellung,” an extension of the Hindenburg Line further south from Verdun to Metz, and started to defend in the context of the “Abwehrschlachten” against the attacking AEF forces.²¹

General Erich Ludendorff, in his function as the chief of the German supreme army command, the OHL, influenced the military actions of German forces as well as he influenced the political environment of Germany by that time. After the failure of the German offensives, Ludendorff promoted the idea to change the German government to a dictatorship, followed by a ruthless mobilization of all German resources. He believed a strong leader in charge of all means and resources could turn the situation in German favor. Therefore, he increasingly interfered with the government, undermined its credibility, and almost tried to gain absolute power towards the end of the war to become this dictator himself. In his “Kriegserinnerungen” or war memories, he elaborated on his impression of a weak German government and assessed that it was a failure of the government to state not clearly and emphatically in public that it was in charge and not him.²²

¹⁹ Mark E. Grotelueschen, *The AEF Way of War: the American Army and Combat in World War I* (Cambridge: Cambridge University Press, 2010), 3.

²⁰ Cron, Hermann, *Geschichte des Deutschen Heeres im Weltkriege 1914-1918 (Imperial German Army 1914-18)*, trans. C.F. Colton. (Berlin: Siegismund, 1937), 74.

²¹ Jacob Jung, *Max von Gallwitz (1852-1937)* (Osnabrück: Biblio-Verlag, 1995), 93 & 97.

²² Erich Ludendorff, *Meine Kriegserinnerungen 1914-1918* (Berlin: Mittler & Sohn, 1919), 440.

General Max von Gallwitz became the commander of the newly established German Army Group Gallwitz at the age of 65. Some critics depicted him as too old for war. Nevertheless, he was one of the most experienced senior officers, which was a source of admiration from junior officers. Overall, contemporaries described von Gallwitz as an intelligent and diligent officer, very well educated, and one of the best commanders who understood his role and his obligations as a leader within the German Army.²³

After he joined the Artillery in 1870, he experienced the aftermath of Napoleon's defeat at Sedan and received his baptism by fire during the Battle of Orleans in December 1870. During the battle, he learned first-hand about the role and importance of the artillery as a decisive element in battle, especially when combined with aggressive German maneuver doctrine. This relates to operational fires and maneuver. He later served as a captain in the German General Staff and the "Kriegsministerium" (Ministry of War), where he was exposed to the likes of General von Schlieffen (author of the Schlieffen-Plan) and the future German Emperor Wilhelm II.²⁴ His primary responsibility in the "Kriegsministerium" was the procurement of artillery equipment. During this assignment, he experienced machine guns and automobiles for the first time at an Army exercise in 1901. He recognized the potential of these new capabilities and anticipated the future use of these technologies, even though it would take at least six more years before the Germans introduced the first automobiles into the Army.²⁵ These experiences related directly to operational fires and maneuver as well. Prior to WWI, Gallwitz commanded at different levels up to a division and became the Inspecting General of the German Army Artillery.

²³ Jung, *Max von Gallwitz (1852-1937)*, 5-7.

²⁴ Ibid., 8-16.

²⁵ Ibid., 17-23.

At the outbreak of the war, Gallwitz received command authority over a reserve corps consisting of two reserve divisions. With those forces, he seized the fortress in Namur at the beginning of the German invasion of Belgium in 1914.²⁶ A devastating artillery bombardment, planned by Gallwitz himself, set the conditions for the overwhelming and successful attack on the fortress. After this event, he once more experienced the decisive potential of artillery fire, which was the predominant provider of operational fires at that time. He gained knowledge in defensive battles on the Eastern front where, where as a corps commander, he supported the defeat of invading Russian forces in Eastern Prussia in late 1914. These experiences shaped his understanding of defensive battles on a large scale, which he could draw on in the “Abwehrschlachten” four years later. In the subsequent years of the war, he held several commands on the Eastern and Balkans front, before he transferred back to the Western front in March 1916.²⁷

In early 1918, Gallwitz observed further tests and exercises with armed automobiles with mounted anti-tank guns, as well as the first German tank unit, and the new artillery. The mobility of the tanks and the accuracy and effectiveness of the improvised anti-tank automobiles impressed him. Gallwitz recognized the potential of these weapons, but did not believe they were mature enough to be of great value during the following offensive operations in spring of 1918. However, he recognized the potential of the new technologies. Above all, he was pleased with the progress of artillery units, which trained to provide accurate lethal fire without “Einschießen” or

²⁶ Hanns Möllner, "Gallwitz, Max Karl Wilhelm von" in *Neue Deutsche Biographie* 6 (Berlin: Duncker & Humblot, 1964), 56-57.

²⁷ Spencer Tucker and Priscilla Mary Roberts, *World War I: A Student Encyclopedia*, 747-748.

zeroing in first.²⁸ After the five German offensives failed to ensure victory, Gallwitz assessed that the war was lost.

The Germans were unable to organize sufficient resources to conduct at least two subsequent attacks and, because of that fact, the Allied force continued to grow almost unhampered. However, Gallwitz also argued that, instead of relying on a solely defensive strategy, the Army must conduct deliberate counterattacks into the flanks of the enemy's main attacks to defeat them. At the end of August 1918, Gallwitz saw no opportunity for the German forces to regain the initiative and concluded that defeat was inevitable. Expecting the attack of the AEF towards St. Mihiel, Gallwitz ordered a withdrawal of his army group to the "Michelstellung" on 11 September 1918. One day later, the Allied offensive in the Meuse-Argonne sector began.²⁹

By the time of the "Abwehrschlachten," Gallwitz had built up a comprehensive experience across all different kinds of battles. Through personal experience, he learned lessons in defensive and offensive operations, already traded time for space while defending against the Russians, and knew about the impact of newly emerging weapons on warfare, once employed on the battlefields for the first time. He was experienced enough to understand the challenges of linking tactical actions to an overarching objective, as well as the challenges of transitioning to the defense after culmination in the offense.³⁰ This brief look at Gallwitz's life supports Zabecki's finding, as mentioned above, that in general, German commanders had a good understanding of

²⁸ Max von Gallwitz, *Erleben im Westen 1916-1918*, 292. „Einschießen“ is a special form of indirect fire, especially used by artillery troops, when in lack of basic data for a precise calculation of the fire parameters. „Einschießen“ can be conducted either on the target directly or on any another point, when the information about the relative position of that point in relation to the target is known. If the guns are zeroed on that point, the required fire parameters to hit the target can be calculated and fire can be shifted from the other point onto the target precisely. This procedure costs time and gives the enemy a warning. The new procedure enables artillery troops to skip the process of „Einschießen“ and engage the target directly and precisely.

²⁹ Jung, *Max von Gallwitz (1852-1937)*, 93-100.

³⁰ Gallwitz wrote two comprehensive works about his actions and these lessons learned as a senior commander during WWI. The first one covered the war from 1914 to 1916 in Belgium, on the Eastern Front, and in the Balkans. The second book, *Erleben im Westen 1916-1918* (Experience in the West 1916-1918), used in this monograph, described his experiences on the Western Front from 1916 to 1918.

the operational level of warfighting and its implications. However, the ability to think operationally does not ensure success on its own. War does not happen isolated, it is embedded in context, and this context might set limitations to operational actions – despite the presence of operational thinking.

The Strategic Context of the German “Abwehrschlachten”

The war took too long. Enthusiasm cannot be conserved for any length of time. In addition, equanimity and the willingness to make sacrifices will be questioned over the time, especially, if a nation is led towards starvation through “Abschließungsgetriebe (?)” and blockades. Time was not working for us – it was against us. Only action could change something, could be decisive. The wait led to equanimity, to discontent. It is not surprising at all that bustling minds, leading politicians started to doubt about our competence and about the skills of the appointed military leaders and believed, to be allowed to interfere in a helping and mediating manner at certain times. Our political headship was too weak to keep things firmly under control and to lead.³¹

Max von Gallwitz, Experience in the West 1916-1918

Based on Gray’s work on the context of strategic history, the understanding of war, warfare, or in this case the actions of the Germans to counter the Allied offensive, requires contextualization. Strategic context evolves holistically and there is a mutual influence of different factors - a constant play between them - within this context. Sometimes this interaction might be non-linear, sequential, or simultaneous.³²

After almost four years of continuous and intense fighting, the German political-military leaders continued to think that Germany still could win the war, even as late as 1918. The victory against Russia in the east in the early spring reinforced this perception. Even though the

³¹ Max von Gallwitz, *Erleben im Westen 1916-1918*, 510: This quote is from the chapter on final considerations, where Gallwitz elaborates on the course of the war. “Der Krieg dauerte zu lange. Begeisterung lässt sich nicht beliebig konservieren. Aber auch Gleichmut und Opferwilligkeit werden auf die Dauer in Frage gestellt, besonders wenn ein Volk durch Abschließungsgetriebe und Blockade dem Hunger entgegengeführt wird. Die Zeit arbeitete nicht für uns – sie war gegen uns. Nur die Tat konnte ändern, konnte entscheiden. Das Warten führte zur Gleichgültigkeit, zum Mißmut. Es ist nicht zu verwundern, daß geschäftige Geister, führende Politiker an unserem Können oder an der Geschicklichkeit der berufenen Führer zu zweifeln begannen und glaubten, bei Zeiten helfend und vermittelnd eingreifen zu dürfen. Unsere politische Leitung war zu schwach, um die Zügel fest in der Hand zu behalten und selbst zu führen.“

³² Gray, *War, Peace and International Relations - An Introduction to Strategic History*, 9-10.

negotiated agreement was fragile and a half a million of German soldiers stayed as an occupation force, this victory allowed the Germans to focus the bulk of their remaining forces in a sequence of decisive offensive operations – the German 1918 offensives – on the western front. Nevertheless, the continuous Allied reinforcement soon led to culmination and the necessity to switch to solely defensive operations. The fact that the German had nearly used all their resources by that time - man, as well as material - reinforced and accelerated this development. Without sufficient resources, Germany was in no longer position to seize the initiative from the attackers. The following described changes in the context led to an environment that denied the Germans offensive actions, which are an important element of defensive wars, as Clausewitz explains in his book on defense. He elaborates that “pure defense would be completely contrary to the idea of war” and “[one] must return the enemy’s blows” by “offensive acts in a defensive war.”³³

The Struggle for Power within German Leadership

By 1918, German political leaders found themselves in a situation, in which they lacked the military capability to seize the initiative or conduct any further decisive actions, without actually being decisively beaten by the Allied forces in the field. The former German ally, Austria, gave up its loyalty towards Germany and sought peace negotiations with the Entente Powers. The people of Germany became increasingly reluctant to support the war, but still lacked awareness about the true situation. Complete defeat was inevitable and it was just a matter of time. By late September 1918, the German Emperor, military headship, as well as the leaders of the Reich administration, and a few industrialists knew this fact. As of October, the German leadership intended to mandate Prince Max von Baden, a relative of the former emperor, to install a new government and initiate peace negotiations based on the 14-point peace program,

³³ Carl von Clausewitz, *On War*, 357.

introduced by United States President Woodrow Wilson in early 1918. The OHL imposed the request for negotiations upon the Prince.³⁴

Ludendorff and other military leaders remained unwilling to guarantee any kind of military success at that point and additionally tried to move the OHL from the political focus as a means to cover the military's poor performance and to obscure the true military situation. The political context characterized the overall military-political conflict within the German leadership. The OHL continuously interfered with political affairs and tried to reject the responsibility for the imminent defeat.³⁵ This power struggle resulted in ambiguous guidance and hampered consistent military planning, but it was not the only challenge emerging towards the end of the war. The war support of the civilian population started to break away.

An Exhausted and Demoralized Home Front

The German population supported the war fiercely after it began and, despite the fact that there was no quick victory and the war extended roughly four more years, they continuously supported the war efforts. The society incurred tremendous sacrifices and burdens because of the war, above all the death of millions of relatives and friends on the battlefields. Some estimates highlighted that starvation, not only caused about half a million deaths during the period of the British naval blockade but, also created the willingness among the citizens to postpone inter-German social conflicts after the war. Propaganda efforts created and fostered the belief that Germany still could achieve peace through a decisive victory by the military. Ultimately, the attempt to achieve an armistice busted this bubble and the willingness to support the war within the population broke away quickly. The immediate termination of the war without any further

³⁴ Reinhard Sturm, Vom Kaiserreich zur Republik 1918/19 in *Informationen zur politischen Bildung* (Heft 261), Website Bundeszentrale für politische Bildung (Heft 261), http://www.bpb.de/publikationen/Z4V2EB,2,0,Vom_Kaiserreich_zur_Republik_191819.html#art2 (accessed January 1, 2012).

³⁵ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 81-82.

bloodshed became priority number one, once citizens came to the realization that all efforts, deprivations, and sacrifices of the past four years had been pointless.³⁶

The German society was exhausted and demoralized. The initial war fever of 1914-1916 vanished without a trace. Food shortages became the driving factor for resistance to the war and the military, industrial firms, and municipalities competed for the remaining limited resources. As a result, strikes became more common and people demanded immediate peace, improvements in the food supply, the release of political prisoners, and the end of the military control of parts of society. This made an already dire situation, in terms of resources necessary for the further conduct of the war, even worse. This ultimately culminated in a decision by the German leadership to use the army against its own population to break the strikes. To counter the threat of a negative impact on the troops from societal discontent, propaganda efforts against anti-war agitation increased. As an example, the chief of the naval general staff alleged in a secret document to subordinate commands, dated September 30, 1918, that the severity of the current situation forced them to leave no remedy untried. He instructed officers to utilize every opportunity to increase, or at least uphold, morale among the soldiers and whenever possible, of the population as well. These instructions explained how officers should interact with soldiers and citizens in trains, transporting exhausted troops to short leaves in their home areas. The document advised officers to travel in civil attire and to cut in on every antiwar conversation. It provided them with arguments designed to counter antiwar comments as well as questions aimed at the people and low ranking soldiers. The key theme was that the entire society would collapse, if fighting would stop immediately.³⁷ This tension between the decreased support of the population and the military's efforts to keep up the fight was not the only source of discontent.

³⁶ Sturm, Website Bundeszentrale für politische Bildung (Heft 261).

³⁷ Ulrich Cartarius, *Deutschland im Ersten Weltkrieg, Texte und Dokumente 1914-1918* (München: Deutscher Taschenbuch Verlag GmbH & Co. KG, 1982), 318-319.

Soldiers and Civilians Compete for Resources

The German Empire evolved during the industrial revolution from an agrarian-oriented to an industrialized economic power alongside Great Britain and the United States. By the end of WWI, the average income per citizen doubled when compared to the income at the time of the foundation of the German Empire in 1871. However, many people perceived their personal economic situation as bad because the average income in 1918 was almost equal to the level of 1895. Regardless of the fact that the German Empire gained significant economic power throughout its existence, WWI destroyed the economic achievements of an entire generation.³⁸ Owing to the prolonged nature of the war, resources shifted from the civil-side to the military. This comprised, for example, about one million draft animals, which the military took away from farmers to pull logistic wagons and artillery pieces. That also meant that the military became the priority for fodder supply. Additionally, the draft of agricultural workers into the military contributed to the deterioration of the agricultural production. Attempts to substitute these missing workers with the aid of females and POWs did not prove successful. The decreased use of fertilizer by 50 percent over the course of the war suggests the impact of this action.³⁹ The war not only reduced the amount of resources German companies produced, it also created the requirement for substitute products for the goods that merchants usually imported to German markets.

Overall, production dropped by one-fifth between 1914 and 1918, notwithstanding the fact that the military used about two-fifths of the German production for military purposes since 1915.⁴⁰ To finance the war efforts, the Germans attempted to implement new taxes, which

³⁸ Carsten Burhop, *Wirtschaftsgeschichte des Kaiserreichs 1871-1918* (Göttingen: Vandenhoeck & Rupprecht GmbH & Co. KG, 2011), 215.

³⁹ Arnulf Huegel, *Kriegsernährungswirtschaft Deutschlands während des Ersten und Zweiten Weltkrieges im Vergleich* (Konstanz: Hartung-Goerre-Verlag, 2003), 100-101.

⁴⁰ Burhop, *Wirtschaftsgeschichte des Kaiserreichs 1871-1918*, 219-220.

produced insufficient results. This led to a credit financing with war bonds, which failed because of insufficient revenues collected through the sales. During the last year of the war, German war related expenses counted 50 billion Reichsmark, eleven times more than in the last year of peace before the outbreak of WWI. In an effort to provide enough money for the government to sustain the war efforts, German banks printed more money, which resulted in rapidly growing inflation as of summer 1917. After that, German economic policy became inefficient and almost non-existent. Solving immediate economic crises dominated political actions at the expense of the development and implementation of economic long-term concepts. In the last months of the war, German industry anticipated an imminent military decision that would result in the end of the fighting and shifted its production partially to peacetime conditions, which led to a further reduction of resources available for military purposes.⁴¹

In a letter to the Chancellor of the Reich, Ludendorff shared his concerns about the sharp deterioration of the economy and the interplay between prices and wages and their influence on the workers. He pointed out the significant increase of clothing prices, which exceeded by far every maximum price fixing and made clothing even for middle class people unaffordable. Additionally, these conditions created a weird situation on the labor market. As Ludendorff stated, some critical workers receives such high wages that there was no incentive to work. Hedonism increased instead and the focus of the workers laid more on spending their money. Sometimes they had celebrations spanning over days. However, employers could not fire them, because there was a significant shortage of workers on the labor market. Workers also attempted to demonstrate less productivity to prevent any additional withdrawal of workers to the battlefields, which led overall to a heavy decline in productivity, up to 60 percent of the regular level. Ludendorff assessed the developments as a threat to German national security and

⁴¹ Friedrich-Wilhelm Henning, *Wirtschafts- und Sozialgeschichte / 3. Das industrialisierte Deutschland 1914 bis 1976* (Paderborn: Schöningh, 1978), 32-43.

suggested countering them by all available means.⁴² The competition for resources between the military and the civil society and the tensions between the government and the civilian workforce ultimately resulted in a further decrease of productivity and reinforced shortage of resources. This situation did not only affect the people - civilians as well as soldiers - it also hindered the production of sufficient numbers of new weapons advancing the battlefields, needed to support the overall defense with well-coordinated offensive actions, coordinated in time, space, and purpose, and geared towards seizing the initiative.

The Challenges of Technical Advances and Availability

Tactical problems with grim strategic implications became a driving factor for technological advance throughout history. Every new technology that arrives on the battlefield, regardless of whose innovations they are, creates new tactical challenges and therefore new military problems. The technological context of war is dynamic and comprises elements of earlier contexts as well the harbingers of future technologies.⁴³

By 1918, in looking at tanks, artillery, firearms, and planes, both sides possessed state-of-the-art equipment. The Allies deployed superior numbers, not least because the AEF's arrival. As an example, the force ratio during an American attack on defending German troops on 26 September 1918 was 8:1.⁴⁴ Additionally, the decreasing industrial production on the German side led to a permanent shortage of guns, both small arms and machine guns, trench mortars, ammunition, and field engineering material.⁴⁵ After a surprise British tank attack, which initiated the Battle of Cambrai on 20 November 1917, the Germans accelerated the development and production of their A7V tank model and even stood up tank units with captured Allied tanks.

⁴² Cartarius, *Deutschland im Ersten Weltkrieg, Texte und Dokumente 1914-1918*, 313-314.

⁴³ Gray, *War, Peace and International Relations - An Introduction to Strategic History*, 11.

⁴⁴ Jung, *Max von Gallwitz (1852-1937)*, 98.

⁴⁵ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 59 & 83.

Mobility and reach were important elements to re-establish maneuver warfare and to push tactical success of breakthroughs into the depth of the enemies defensive to gain operational success. Most military commanders, Gallwitz included, knew about the potential of tanks. Nevertheless, it took until 21 March 1918 before the first German A7V tanks appeared on the battlefield during the St. Mihiel offensive. According to a German tank commander's narrative in the book *Deutsche Kampfwagen greifen an!*, German crews developed confidence in their tanks. Besides some issues, like the mobility on very muddy terrain, overheating engines, and its limited capability to cross trenches wider than 2 meters, the A7V models prevailed in battle.⁴⁶ Nevertheless, the small number of available A7V, 20 systems, employed in combat operations provided no significant influence on the outcome of the war, when compared to the 381 British tanks utilized in the attack at Cambrai alone.⁴⁷ On the other side, the Germans employed more advanced artillery pieces than the Allied had at their disposal. Additionally, the way the Germans used artillery, following the newly developed guidelines by Colonel Georg Bruchmüller, proved far more effective. However, the Allies would ultimately succeed based on their superior numbers.⁴⁸ The tactical aspects of warfare focus more on finding a technological solution to a specific tactical problem. To achieve the aims of a war, a strategy must guide the use of these new technologies and hereby gear this usage towards a common goal. Additional challenges emerged when the German war goals shifted at a pace and in a direction, with which strategy could not keep up.

Military-Strategic Changes Alter the War Aim

Three elements characterize the military-strategic context of the Abwehrschlachten. First, the nature of the war changed from a two-front war to a war solely fought on the western front.

⁴⁶ Ernst Volckheim, *Deutsche Kampfwagen greifen an!* (Berlin: Mittler&Sohn, 1937), 4-15.

⁴⁷ Hart, *The Real War, 1914-1918*, 345.

⁴⁸ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 59 & 83.

However, the Germans lacked the ability to relocate all their forces from the eastern to the western front, as they had to guard the fragile peace with occupation forces in the gained eastern territories. At least the fighting in the east stopped.⁴⁹ Second, the Germans depleted a large part of their resources, leaving insufficient reserves to execute promising attempts to regain the initiative. Germany was on the defense and, even though General Gallwitz advocated counter-attacks as part of the defensive battle, he knew that he lacked the resources to do so successfully. The entire military effort, and therefore the operational planning, had to occur in a pure defensive mindset. Increased use of network defense and defense in depth became the logical consequences. Gallwitz opined during Mid-August of 1918 that the war has enfeebled Germany significantly and therefore Germany has to go on the defense everywhere.⁵⁰ Third, the deployment of the AEF in 1917 and the series of unsuccessful final German attempts to conduct offensive operations allowed the Allies to start their offensive as of 18 July 1918. The increased Allied strength, owing to the AEF build-up, facilitated an increase of operational tempo on the Allied side, and it forced the Germans into a continuous retreat.

From a German perspective, this confluence of events could only result in an armistice, even though the OHL maintained its propaganda efforts to keep the forces in the fight - driven by the belief only military means could generate a result. However, the Germans made their first attempts to negotiate for peace as early as December 1916 and continued to do so throughout the remainder war. The strategy behind these “peace feelers” aimed at negotiating separate peace treaties with each party to the conflict, but this approach only raised skepticism on the Allied side. Even though Germany could negotiate a separate peace with Russia, the OHL, driven by Ludendorff and Hindenburg did not follow this diplomatic approach. Based on their assessment,

⁴⁹ Sir J.A. Hammerton, *A Popular History of the Great War Volume V: The Year of the Victory 1918* (London: The Fleetway House, 1933), 19.

⁵⁰ Jung, *Max von Gallwitz (1852-1937)*, 96.

Germany had to determine the outcome of the war by military action, which meant they had to keep the forces in the fight, and try to defeat the French and British armies before the arrival of the AEF.⁵¹ The three continental war parties literally put Germany in a clinch. After Germany defeated Russia to the east, France remained to the west and England to the north-west.

The Challenges of Occupying the Center Stage and a Common History

As Gray asserts, the geographical location of an entity or nation significantly influences the interaction with its neighbors. Going further, he argues that the characteristics of the natural landscape shape political actions as well. The strategic consequences of Germany's position in the center of Europe provide a starting point for the evaluation of the geographical context of the "Abwehrschlachten."⁵² While Liddell Hart stated that Germany's position in the middle of Europe is of strong nature and the surrounding nations would not have been able to defeat Germany successfully without the help of American forces from overseas, the geographical situation remained challenging.⁵³ Battles across Europe often involved multiple actors and almost all the European nations involved in WWI fought wars against at least one of their neighboring states previously. Military commanders knew the battleground either from personal experience gained in pre-WWI conflicts, like Gallwitz, or from the military historic archives of their respective country. After the defeat of Russia, Germany fought on only one front, without the challenges of a large Eastern front anymore. Still, the Western front, stretching from the Mediterranean Sea to the North Sea, required a significant amount of forces and prevented Germany from massing troops in a manner to achieve a decisive victory. Where the front line reached the Northern Sea, the relative small strip of German coastline allowed the Allies to

⁵¹ Roger Chickering, *Imperial Germany and the Great War, 1914-1918* (Cambridge: Cambridge University Press, 1998), 166-170.

⁵² Gray, *War, Peace and International Relations - An Introduction to Strategic History*, 12.

⁵³ Hart, *The Real War, 1914-1918*, 204.

implement an effective naval blockade, with the desired effect on the German society and subsequently on the forces.

While Gray asserts that, nearly all politicians and soldiers at the time of the outbreak of WWI lacked a realistic imagination of what modern warfare, given the technological opportunities and the size of mass armies, would look like. By 1918, reality had caught up with them.⁵⁴ This did not necessarily mean that leaders possessed the ability to draw the right conclusions from the impressions the modern war made on them. For example, after the German counter-offensive at Cambrai, in which storm troops regained more than half the ground the British had taken through their tank attack, Ludendorff for example maintained the impression that the infantry achieved a complete victory. Therefore he, and as a consequence the OHL, neglected to accept the potential of the newly employed weapon system on the battlefield – the tank – at this point of the war.⁵⁵ Furthermore, this misperception and the resulting failure to produce and employ tanks to counter enemy tanks started to undermine the faith of the troops in their generalship.⁵⁶

Operational Art and the German “Abwehrschlachten” in 1918

With the beginning of the “Abwehrschlachten,” Germany was not pursuing the same goals, as it did when the war broke out and the desired outcome for the war shifted towards the acceptance of an unavoidable end state. Looking at the conditions after the unsuccessful German 1918 offensives, Germany lost the war, even though the Allies never administered the German Army a crushing military defeat.⁵⁷ According to FM 3-0, “The end state is a desired future condition represented by the expressed conditions that the commander wants to exist when an

⁵⁴ Gray, *War, Peace and International Relations - An Introduction to Strategic History*, 12.

⁵⁵ Asprey, *The German High Command at War*, 353-354.

⁵⁶ *Ibid.*, 353 to 461.

⁵⁷ Hermann von Kuhl, *Execution and Collapse of the German Offensive in 1918 Part II (Trans. from German)* (Washington D.C.: The Army War College, 1934), 87.

operation ends.”⁵⁸ FM 3-0 explains further, that the one who defines an end state must understand the operational environment and assess friendly and enemy forces, as well as the populations of the involved parties. This promotes unity of effort and helps to synchronize and integrate one’s actions. FM 3-0 also accounts for the possibility that end states may evolve. This falls in line with Clausewitz’s statement that the outcome of a war is never final. As an inversion of his argument, the end state in a conflict cannot always be determined at the beginning. The ultimate end state in a war is to compel an enemy to do one’s will and to make the enemy defenseless.⁵⁹

While at the beginning of WWI the perception of a war of defense was predominant in Germany, the initial success augmented the war aims to a more ambitious war of annexation. From the original idea before the war, driven by commercial interests in the regions of Africa and the Middle East, the focus shifted to areas in the immediate vicinity of Germany to the east and to the west. The intent was to expand German power projection from the center of Europe and hereby counter the perception of German encirclement, with the ultimate goal to ensure a permanent German hegemony in Europe. Once Germany achieved that, it could have switched to the pursuit of the initial pre-war plans – establishing a global acting German Empire. The “Septemberprogramm” (September program), announced by the German Chancellor on 9 September 1914 should have ensured the permanent defeat of France and Russia and the expansion of the German borders into both of these countries.⁶⁰

After five unsuccessful German offensives in the first half of 1918, and because of the increased strength of the Allied forces with the arrival of the AEF, the German war aims shifted significantly. After the signing of the Treaty of Brest-Litovsk on 3 March 1918, Russia did not participate in the war any longer and the two-front war for Germany ended. The Germans

⁵⁸ Headquarters Department of the Army, *FM 3-0 Operations*, 7-27.

⁵⁹ Carl von Clausewitz, *On War*, 75-80.

⁶⁰ Fritz Fischer, „Deutsche Kriegsziele. Revolutionierung und Separatfrieden im Osten 1914-1918“ in *Der Erste Weltkrieg und das deutsche Geschichtsbild* (Düsseldorf: Droste, 1977), 153.

perceived the treaty as a sign that it could achieve a solely military victory in the west as well. Since the outbreak of the war in 1914, German politics operated on the assumption that the future of Germany's domestic institution was inseparable from the military outcome of the conflict. This perception almost blocked internal political decisions and fed the will to continue the war in the west until one of the sides capitulated. Ludendorff, who constantly tried to militarize the German domestic politics, prepared to achieve a decisive victory in the west as well.⁶¹ With the necessity to switch to solely defensive operations on the western front, the end state for the military operations shifted as well. Following Zabecki's findings that the Germans showed a developed understanding of how to link tactical actions in time, space, and purpose during their large-scale offensive operations, the question is how they were able to transfer these skills to the emerging defensive scenario.

Defeating the Enemy Before he Becomes Effective

While FM 3-0 describes the center of gravity as the "source of power that provides moral or physical strength, freedom of action, or will to act,"⁶² Clausewitz orients himself with his description more at the idea of a center of gravity in physics. He describes it as "the hub of all power and movement, on which everything depends."⁶³ In book six on defense, Clausewitz explains that the center of gravity is where the mass of a force is concentrated and from where the heaviest blow towards the enemy originates.⁶⁴ With an overall number of 2,084,000 American soldiers, of whom 1,390,000 saw active service at the front lines, the AEF was clearly a mass of force from which decisive action could be undertaken towards the Germans. The introduction of the AEF into the battles shifted the ratio of the rifle strength from an advantage on the German

⁶¹ Chickering, *Imperial Germany and the Great War, 1914-1918*, 158-165.

⁶² Headquarters Department of the Army, *FM 3-0 Operations*, 7-30.

⁶³ Howard und Paret, *Carl von Clausewitz: On War*, 595-596.

⁶⁴ *Ibid.*, 485-486.

side to the Allies, who by November exceeded the German number by 600,000.⁶⁵ In hindsight, Ludendorff stated in his war memories that the attempts to compel the nations of the Entente through German victories to accept peace before the American reinforcements arrived failed.⁶⁶ The fact that General Pershing in his final report also assessed the AEF as a central element of Allied strength supports the German perception of the potential of the fresh forces. Pershing elaborated that American forces with a determined purpose joining the fight would significantly affect German morale and prestige. On the other hand, the early arrival of the AEF ensured a boost to the morale of the Allied partners.⁶⁷ If the Germans could have forced the British and the French into separate peace agreements, as they achieved one with the Russians on the Eastern front, before the AEF joined the fight, they would have shortened the war and reduce the negative effects on Germany. Following these thoughts, the Allied Center of Gravity from a German perspective shifted towards the AEF, even before it became effective on the battlefields. Because of resource limitations, the Germans were in no position to attack the Center of Gravity effectively with a direct approach. It was also unlikely that the German forces could have defeated the AEF through attrition. The only chance Germany had was to render the AEF ineffective, before it became combat ready – an indirect approach. They tried to do that through their 1918 offensives.

Gaining Time is Decisive During the Defense

In general, Clausewitz describes a decisive point as a location where one brings as many troops as possible into the fight, to seek a decision. Especially in the absence of absolute superiority, like in the case of the German “Abwehrschlachten” against the Allies, the Germans

⁶⁵ Leonard P. Ayres, *The War with Germany. A Statistical Summary* (Washington: Government Printing Office, 1919), 118.

⁶⁶ Erich Ludendorff, *Meine Kriegserinnerungen 1914-1918* (Berlin: Mittler & Sohn, 1919), 545.

⁶⁷ Pershing, *Final Report of Gen. John J. Pershing*, 19.

tried to employ their available forces with such a skill, that they would have been able to achieve at least relative superiority at the decisive point.⁶⁸ FM 3-0 expands this view and asserts that besides a geographical location, a decisive point can also be a specific key event, critical factor, or a function that allows commanders to gain an advantage and ultimately to defeat the enemy. At the operational level, decisive points lead to the enemy's Center of Gravity, through an operational approach. From a defensive perspective, prevailing at decisive points puts oneself in a position to regain the initiative. The following exploitation comes very likely along with a transition to the offense.⁶⁹ Zabecki stated that there was a misunderstanding of the term decisive point during the "early period of operational reawakening in the West."⁷⁰ Looking at the basic ideas of Clausewitz, a decisive point is more like a point of main effort or "Schwerpunkt," where a military leader masses his forces to seek a decision. Zabecki related a quote from Hindenburg, who stated that an operation without a "Schwerpunkt" is like a man without character.⁷¹ Looking at the German defensive operations and their application of the principles of building a "Schwerpunkt," they had no other opportunity to put the bulk of their forces against the anticipated main effort of the Allies. Without the resources to conduct successful counterattacks, the decision where to place the "Schwerpunkt" was on the German side reactive rather than characterized by initiative. Following the notion that the principle of a decisive point is driven by initiative and therefore more applicable to offensive operations, it is not surprising that Clausewitz does not use the term "decisive point" throughout his entire book on the defense, book six. As Zabecki explains, the Germans knew about the concept of decisive points and applied it in an appropriate manner throughout their offensive campaigns.⁷² The lack of resources to conduct

⁶⁸ Carl von Clausewitz, *On War*, 195-196.

⁶⁹ Headquarters Department of the Army, *FM 3-0 Operations*, 7-48 to 7-51.

⁷⁰ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 31.

⁷¹ Ibid.

⁷² Ibid., 31 & 317-318.

offensive operations within their “Abwehrschlachten” and the significant numerical superiority of the Allies made it almost impossible for the Germans to apply this principle in an active manner, rather than in reactive one. Early September 1918, General Gallwitz proposed to conduct a spoiling attack from positions near St. Mihiel against the AEF, rather than just to fall back into the next defensive line, the “Michel Stellung.” The Germans believed that the AEF was preparing for an upcoming Allied offensive on Metz, but when a few days later intelligence adjusted the Allied objective to St. Mihiel itself, the Germans assessed the planned attack to be unfeasible and cancelled it.⁷³ This attack would have been a decisive point.

Looking from a perspective of FM 3-0, some of the German actions followed the idea of a decisive point being a key event or a critical factor, rather than a geographical force concentration. As Gallwitz explains in his assessment of the “Abwehrschlachten,” it was very important that the defending forces in one line hold as long as possible to gain time for the withdrawal of troops and to provide them time for further preparations in subsequent defensive positions.⁷⁴ The ultimate goal would have been to gain that much time that the fight would have continued until the outbreak of the winter 1918/1919, which, according to General Kuhl’s analysis, would have granted the Germans a large operational pause, allowing them to put themselves in a better position for spring 1919. This position could have been beneficial for either fighting or negotiating.⁷⁵

If You Cannot Win, Keep Your Forces in the Fight to Avoid Defeat

After the fifth offensive in 1918, the Germans did not have sufficient resources to maintain offensive operations. Gallwitz convinced Ludendorff that at least two additional

⁷³ Jung, *Max von Gallwitz (1852-1937)*, 97.

⁷⁴ *Ibid.*, 98-101.

⁷⁵ von Kuhl, *Execution and Collapse of the German Offensive in 1918 Part II*, 107-109.

offensives would be necessary to achieve a decision over the Allies. Throughout the planning process and with time marching on, they realized that the available artillery was not sufficient to support these attacks and Allied advances fixed more of the German forces. When Gallwitz assessed the situation in early August 1918, he saw everything pointing towards defensive actions. The OHL prepared for the Abwehrschlachten, while maintaining a small capability for limited regional counterattacks.⁷⁶ If not by then, at least on 8 August 1918, named by Ludendorff as “der schwarze Tag des deutschen Heeres” (the black day of the German Army), Germany culminated offensively and transitioned to the defense.⁷⁷ This situation meets the definition of FM 3-0 that a force has culminated, when it no longer possesses the capability to continue its current form of operation. Germany transitioned from the offense to the defense and now faced the possibility of culmination in the defense.⁷⁸ This occurred locally with every withdrawal to the next defensive position, owing to the increased pressure of advancing Allied troops. With the increasing number of attacking Allied troops and the deteriorating German supply situation, culmination in the defense was just a matter of time. Gallwitz knew this, as his entry in his war diary at the last day of August 1918 reveals. He lacked the ability to imagine how Ludendorff, given the situation at the frontlines, thought that the Germans could ever seize the initiative again. The constant withdrawal after culminating in a defensive line was not a promising approach. Gallwitz journalized that the initiative was completely on the side of the Allies.⁷⁹ The Germans only chance for, was to keep up the defense until the winter 1918. The OHL assessed, that the

⁷⁶ Jung, *Max von Gallwitz (1852-1937)*, 94-95.

⁷⁷ Erich Ludendorff, *Meine Kriegserinnerungen 1914-1918*, 547. August 8 in 1918, the start of the final Allied offensive, was named by Ludendorff as the black day of the German Army. The Allies achieved a penetration of the German positions in the battle of Amiens and hereby forced the Germans to withdraw on a large scale. Even though the Germans were able to stabilize the situation and slow down the Allied advance on the following day, the Allied success at Amiens was a blow to German morale. German defeat was inevitable, not at least due to the massive numerical superiority of the Allies, increasing constantly along with the AEF force build-up.

⁷⁸ Headquarters Department of the Army, *FM 3-0 Operations*, 7-85.

⁷⁹ Jung, *Max von Gallwitz (1852-1937)*, 96.

Allied would not continue their offensive operations throughout the winter, which meant that the Germans could recover until the revival of the Allied offense in spring 1919. This possibility of a breathing spell, as named by Ludendorff, did from a German perspective not only entail the opportunity to prolong own culmination, but also a chance to force and exploit Allied culmination. The Germans assessed the Allied lines of communication as overextended. There was a small window of opportunity to exploit that situation to moderate the terms of an armistice. In his post-war analysis, General von Kuhl concludes that on the day of the armistice the British lines of communications had reached their maximum of extension. He supports his statement by the fact that the British needed six days after the armistice to resume their advance, which they were only able to conduct with less than one-third of their force.⁸⁰ The Germans understood the principle and the implications of culmination, but given the limitations in means, they were neither able to prevent their own culmination in the defense, nor impose culmination on the Allies. Even though German military leaders perceived a window of opportunity to exploit the operational pause of the Allies, they were in no position to capitalize on the situation. The resource limitations and ultimately the breakaway of the war-support of the German people, epitomized through the outbreak of the German revolution, did not allow another outcome of the war than the armistice on 11 November 1918 and until then the defensive battle continued.⁸¹

A Planned Retreat

According to FM 3-0, “A line of operations is a line that defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives.”⁸² While Zabecki is distinguishing between the different lines of

⁸⁰ von Kuhl, *Execution and Collapse of the German Offensive in 1918 Part II*, 87.

⁸¹ Ibid., 109.

⁸² Headquarters Department of the Army, *FM 3-0 Operations*, 7-54.

operations following Jomini's interpretation and concludes that the Germans used interior, but divergent lines, with respect to the defensive operations, the concept of lines of operation is not applicable in a sufficient manner in this defensive scenario. Looking at the geographic position of Germany, the conduct of the "Abwehrschlachten" relied on interior lines. Rather being able to connect decisive points geared towards an objective related to the enemy, as done by the Germans during the planning for offensive operations, the Allied advance determined the decisive points during these battles. Of course, the Germans had a vote in the decision where and when to fight, by deciding to keep a defensive position as long as possible or by withdrawing to the next position and hereby trading space for time. Again, Clausewitz, although he introduces the term of lines of operations in his work *On War*, does not use it throughout his entire book on defense. In chapter 9 of book six, he uses the term "line of retreat."⁸³ The German system of defensive lines and the network of defensive positions enabled them to follow a pre-planned retreat. This planned retreat, or the German line of retreat, represents a variation of lines of operations. Rather than defining geographical locations, like for a line of operations in an offensive battle, it appears that the time and space relationship gains more importance in a defensive scenario. A defender facing an overwhelming enemy might define a line of retreat with respect to locations, like the defensive lines "Hindenburg Linie" and "Michel Stellung." The duration, which those defensive positions must be held by the troops, is more decisive, because the synchronization of withdrawing troops and the reestablishment of further defensive positions in depth depends on it. The German concept was the defense-in-depth.

The Dimension of the Battlefield Increases

The extension of operations in time and space creates depth on the battlefield. Even though German WWI commanders might not have had a full understanding of the concept of

⁸³ Carl von Clausewitz, *On War*, 391-392.

depth, but with the emergence of new weapon systems, as well as advance means of transportation and supply, the scale of battles increased. The realization that the outcome of the close battle was not determining a decision on the battlefield alone challenged military leaders to evolve from the concept of linear and sequential operations towards a non-linear approach.⁸⁴ As the responsible General for artillery procurement in the “Kriegsministerium” and due to his combat experience prior to and early in WWI, Gallwitz knew about the devastating effect and the potential of artillery.⁸⁵ New concepts of fire and constant development of the weapon systems enabled the Germans to conduct fire operations in depth, eventually independent from the fire support of close fights. The high artillery related casualty rates on the Allied side showed the importance of artillery as an element of German operational planning.⁸⁶ With the focus on defensive operations, the German developed early in WWI the concept of the elastic defense-in-depth. On 1 December 1916, the Germans implemented *The Principles of Command in the Defensive Battle in Position Warfare*. The basic idea was to force the attacker to expend himself and to allow the defender to preserve his strength. The new tactic was enemy focused and did not aim at the retention of terrain as the purpose of a defense. Nevertheless, terrain played an important role in planning a defense-in-depth. Extending the defensive zones backwards deep into own territory allowed the Germans to implement defensive positions where they were protected from Allied observation. Hereby, they ensured the element of surprise through massive, unexpected defensive fire from prepared positions and unexpected counterattacks by units hidden

⁸⁴ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 33-34.

⁸⁵ As described in the biographic review of Gallwitz, he understood the purpose and the value of operational fires and pushed the development of artillery during his time as the Inspecting General of the German Army Artillery. New employment principles for fires, as developed by the German Colonel Bruchmüller in WWI additional increased the effectiveness of the German artillery, besides its technical development.

⁸⁶ Website Deutsches Historisches Museum, Berlin (German Museum of History), <http://www.dhm.de/lemo/html/wk1/kriegsverlauf/material/index.html> (accessed January 5, 2012): Artillery fire caused approximately half of the deaths.

in the depth. Additionally, long-range artillery provided operational fires, guided by observers collocated with the defending troops in the staggered defensive positions. The availability of a reliable communication network strengthened the entire defense concept.⁸⁷ The Germans showed an understanding of depth as an element of operational planning throughout their offensive operations. Zabecki mentions the storm trooper tactics as a divergence from linearity and the use of artillery as an example for operational deep attack.⁸⁸ As long as the Germans employed artillery in the defensive zones and supplied the artillery units with sufficient quantities of ammunition, the German artillery units conducted operational deep fires in the defense. Limited means of motorized combat or transport vehicles did not allow them to conduct operational maneuver and further develop the elastic defense-in-depth into a mobile defense. During the “Abwehrschlachten,” the battles in the defensive zones were solely defensive and not supported by regional counterattacks as foreseen in the basic concept. As explained by Clausewitz, without offensive actions as mandatory part of the overall defensive concept, the objective remains one of a negative type and the initiative stays with the attacker.

Timing, Tempo, and Sequencing

A total number of 235 divisions attacked during the five sequential German offensives in early 1918 all of which required coordination in time and space. As Zabecki asserted, sequencing and timing on that scale indicated operational art and distinguished it from tactics.⁸⁹ However, during the “Abwehrschlachten” external factors imposed timing, tempo, and sequencing on the German military. Besides the need to react to Allied actions, the rate of supplies and the availability of reinforcements, or replacement forces, determined the level the Germans ability to

⁸⁷ Timothy T. Lupfer, *Leavenworth Papers No.4 - The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War* (Fort Leavenworth: Combat Studies Institute, 1981), 11-20.

⁸⁸ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 27 & 34.

⁸⁹ *Ibid.*, 321-323.

act freely. The overwhelming force of the Allied dictated the timing and tempo on the defenders, while the Germans had no choice other than to shape the battlefield than through retreat and occupying deeper defensive positions. By defending as long as possible in one position and prolonging the withdrawal to the next position, the Germans had a limited opportunity to influence the tempo. In an offensive operation, tempo generally aims at overwhelming the enemy through rapid action.⁹⁰ At the beginning of the “Abwehrschlachten,” the German military leaders assessed that it is unfeasible to impose their will upon the Allies by the conduct of purely defensive actions. However, with no resources and means at hand to regain the initiative, the only chance of mitigating the effects of a defeat from a German perspective was to slow down the operational tempo of the Allies as much as possible. With this approach, the Germans intended to paralyze the Allied will through fierce defenses gradually, rather than breaking it.⁹¹

The Challenge of an Increased Battlefield Decreases During the Defense

In general, the conduct of an “Abwehrschlacht,” especially against an overwhelming enemy, serves the purpose to trade time for space. The defending forces retreats continuously and hereby the distance for supply or reinforcement decreases, as the troops withdraw closer to their headquarters’ command post and supply facilities. Understanding operational reach, as the distance and duration across which a unit can successfully employ military capabilities,”⁹² the only means the Germans had to do so, with respect to combat power, was the artillery. For their supplies, the Germans relied on a sufficient rail and road network, allowing them to resupply on interior lines from central Germany. With every retreat, those lines and therefore the operational reach became shorter. The danger was that Allies would cut German lines of communications

⁹⁰ Headquarters Department of the Army, *FM 3-0 Operations*, 7-71.

⁹¹ von Kuhl, *Execution and Collapse of the German Offensive in 1918 Part II*, 93.

⁹² Headquarters Department of the Army, *FM 3-0 Operations*, 7-65.

through an envelopment of German defensive positions. To maintain the coherence of the defense was therefore important to ensure reach, with respect to the supplies. Zabecki asserted that by the end of WWI weapon systems that would have provides operational reach with respect to fires and maneuver, like tanks, aircraft, and long-range artillery, just began to emerge. Operational mobility was thereby largely limited to rail.⁹³

Conclusion: Operational Art and Defense – A Contradiction?

More than four years of war form 1914 to 1918 also meant four years of the evolution of warfare and the thought and behavior of those engaged in the conflict. Tactics evolved, new technologies resulted in new weapons, attitudes of the warring societies, and last but not least military thinking. Faced with the challenges of costly position warfare, the Germans developed new ways to organize their battles and thereby refined their understanding of a perceived additional level of thinking, located between unit tactics and grand, all-encompassing strategies. The biggest leap in operational thinking occurred during the planning and execution of their 1918 offensives. It was a last costly struggle intended to end the war before the Allies would have gained an unmatched superiority when the United States joined the war. In hindsight, these offensives became Germany's last round in the magazine. Culmination was the logical consequence and put Germany in a position of reaction, leaving the initiative completely on the Allied side. "Abwehrschlacht" was the new term, which intermingled with the military, the society, the economy - the entire German nation was on the defense.

Although Clausewitz acknowledges that the defensive is the stronger form of warfare, this does not mean that Germany was in an advantageous position in late 1918. Clausewitz continues and explains that due to the negative aim of a defense – preservation – it should only be conducted as long as the own weakness dictates it. The Germans tried to preserve time with their

⁹³ Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War*, 35.

“Abwehrschlachten” to put them in a stronger position after the winter 1918/1919 from which they might have been able to pursue limited positive objectives again, as introduced by Clausewitz as the goal of the defense: The transition to offensive operations.⁹⁴

Despite the experience and the operational level knowledge the Germans accumulated during four years of fighting, it becomes clear in an analysis of the strategic context and a reflection of the German actions throughout the “Abwehrschlachten,” how the Germans transferred and used this operational knowledge during their last defensive battles, and the limitations they encountered. Compared to Zabecki’s findings that German military commanders in 1918 possessed a clear understanding of the existence and importance of an operational level of war, no significant change occurred over the course of the last three to four months of the war after the offensives. German military commanders expressed the same level of understanding during their defensive operations in late 1918, either through their actions in the field or through their writings, as they did during the offensives earlier that year. However, the degree to which they transitioned this operational knowledge into tactical actions arranged in time and space geared towards the overarching German strategic aim depended strongly on external factors: the strategic context.

First, the strategic aim shifted over the course of the war significantly and turned from a positive aim of expansion toward a negative aim of survival. As a victory was out of reach, the plan was to withstand the Allied attacks as long as possible, while constantly attempting to improve the German position for peace negotiations. The goal was to keep forces in the fight to avoid defeat. This aim provided German commanders no clear objectives and therefore made it difficult to conduct tactical actions that actively served that purpose, rather than just conducting a series of reactive actions caused by Allied initiative. Second, the struggle for power between military and political leaders during the last months of the war, worsened the situation, and

⁹⁴ Carl von Clausewitz, *On War*, 358.

obscured political guidance with respect to strategic aims of the war. Ultimately, it was more a struggle to establish a narrative of whom to blame for the inevitable German defeat.

The most decisive factor influencing the operational freedom of the forces were the deteriorating situation on the German home front and the associated decreased effectiveness of the industry. These developments affected the forces on the front lines in a way that hampered the German application of operational art in a promising manner. During 1918, especially after the German offensives failed to achieve victory over the Allied forces, and furthermore depleted a large amount of German resources - man as well as material – the initial war enthusiasm of the German population turned into open rejection. This culminated in the revolutionary movement shortly before the armistice. Additionally, the struggle for resources between the military and the civil society prevented commanders from employing forces in a number and manner, they would need to regain the initiative. The situation was a vicious circle. On the one hand, the military needed a constant flow of supplies, ammunition, weapons, tanks, and other equipment, but Germany withdrew the workers needed to produce the materiel for war from the production facilities to replace the significant losses in the German troop formations. When the war finally affected the population on a large scale, through growing inflation, a shortage of food and clothing, as well as the need to feed more and more man into the war machine, resentment towards German war efforts grew. Given these conditions, the Germans were unable neither to replace their losses, nor to allocate sufficient resources to the production of new advanced weapon systems like tanks. Nevertheless, especially tanks, as well as motorized means of transportation, proved crucial to apply operational art in a defense with the aim to regain the initiative. However, by that time, Germany was exhausted.

The analysis, based on the framework of operational art, delivers two findings. One the one side it provided an assessment of the application of operational thinking reflected in German military actions. On the other hand, it appears that the concept of operational art, as stated in the introduction, is predominately build around offensive actions. Even though Clausewitz named the

defensive as the stronger form of warfare, military commanders always compete over the initiative. Offensive operations are decisive. This is depicted in the language Clausewitz used, as in the language of today`s military doctrines.⁹⁵ By analyzing a solely defensive type of warfighting, the German “Abwehrschlacht,” the language of operational art appeared not to match the conditions of the defensive, as well as it applies to the offensive. By analyzing other predominantly defensive scenarios, a framework for operational art in the defense with the respective elements of operational art in the defense could be developed, following the discussion about lines of operations and lines of retreat in the section “Operational Art and the German “Abwehrschlachten” in 1918.

The analysis of the military actions using the framework of operational art and the elements of operational art with more offensive character shows that German military commanders knew about the importance to attack the enemy`s center of gravity. They also knew that, given the conditions at that time, they would have to use an indirect approach. The plan aimed at forcing France and Britain into separate peace agreements by decisive offensive operations before the AEF arrived on the European battlefields. After this goal was not met, any plan to attack the enemy`s Center of Gravity – the AEF – appeared unfeasible. In a purely defensive scenario, the benefit of knowing the enemy`s Center of Gravity helps to identify his intended axis of attack and to set up effective defenses, rather than acquiring targets and objectives for own strikes against it.

Thinking through decisive points, German military commanders possessed the ability to decide where to fight, by choosing effective defensive positions. Intelligence assessments, determining where the next Allied attack might occur, were the predominant factor when determining decisive points. Germany was on the defense and that meant the forces reacted rather

⁹⁵ Headquarters Department of the Army, *ADP 3-0 Unified Land Operations* (Washington D.C.: Headquarters Department of the Army, 2011), 1. According to ADP 3-0 the purpose of operations is to seize, retain, and exploit the initiative to gain and maintain a position of relative advantage.

than being proactive. Therefore, the idea of decisive points forming a line from one's own base towards an objective related to the enemy was not applicable for German commanders in this defensive scenario. The concept of lines of operations seemed unsuitable for a defensive scenario as well. With those lines pointing towards their own nation, rather than an objective in the territory of the enemy, the German lines of communication, or in this case the interior lines, became shorter with every withdrawal of forces to the next defensive position. Because of the conditions present, the Germans were unable to address decisive points, reach, timing, and sequencing, as well as lines of operations, even though they knew about them and followed those principles throughout their offensive. In a defensive scenario, as mentioned above, a construct like a "line of retreat" synchronizing time and space among defending and withdrawing forces, rather than a line of operation, orientated along geographic locations leading towards an objective or even the Center of Gravity can help commanders planning their defenses.⁹⁶ A line of retreat would not be geared towards the enemy's Center of Gravity. Its purpose is to make the striking power of the enemy's force less effective, at best rendering it ineffective.

The Germans knew that they had culminated in the offensive and defeat was inevitable. Nevertheless, to avoid the devastating culmination in the defensive, the Germans attempted to impose culmination on the advancing Allies. The basic idea to force Allied culmination through a series of time-consuming fierce defensive battles with high casualties that resulted in paralyzing the Allied will, rather than breaking it, showed the sequencing of tactical actions in time and space geared towards a common goal. This meets contemporary basic definitions of operational art.

The overarching theme, which limited German military commander's application of operational art, resulted from the shortage of resources. Germany fired its last bullets with five

⁹⁶ Carl von Clausewitz, *On War*, 391-392.

unsuccessful offensives from March to August 1918 and from that point, the countdown to defeat was inevitable. After the black day of the German Army, this was no secret to anyone.

“The 8th of August gave proof of the decline in our striking power and deprived me of the hope, considering the state of our replacement situation, of finding a strategic remedy which would again consolidate the situation in our favor ... The war had to be terminated.”⁹⁷

A view on the German “Abwehrschlachten” through an analysis of the strategic context and the military actions conducted in a defensive scenario reinforced Zabecki’s assessment of the developed understanding of operational thinking of most German military leader. However, the analysis also shows that operational art is closely tied to offensive operations. Additional case studies of predominately defensive battles, campaigns, and wars might lead to a development of a more specific framework of operational art in the defense, considering the fact that even today’s military operations, despite all the offensive power of modern military, typically have negative aims.

Furthermore, the need to conduct “Abwehrschlachten” led to a refined elastic defensive-in-depth and besides initial success in World War II, German military commanders soon found themselves again involved in “Abwehrschlachten,” desperately trying to avert or at least delay the inevitable defeat. Since the rearmament of Germany in 1956, the foundation of the “Bundeswehr,” delay operations and mobile defense against an overwhelming conventional force, with offensive operations being an integral part rather than an individual type of warfare, were the two forms of warfighting the forces trained to conduct. Further research overarching the evolution from the WWI defense-in-depth to the NATO defense plans in the Fulda-gap would enhance the understanding of operational art in the defense.

⁹⁷ Ludendorff, *Meine Kriegserinnerungen 1914-1918*, 551.

BIBLIOGRAPHY

- Asprey, Robert B. *The German High Command at War*. New York: W. Morrow, 1991.
- Ayres, Leonard P. *The War with Germany. A Statistical Summary*. Washington: Government Printing Office, 1919.
- Boog, Horst. *Operatives Denken und Handeln in deutschen Streitkräften im 19. und 20. Jahrhundert. (Operational thinking and action in German forces in the 19. and 20. century)*. Herford: E.S. Mittler & Sohn GmbH, 1988.
- Burhop, Carsten. *Wirtschaftsgeschichte des Kaiserreichs 1871-1918. (Economic history of the German empire 1871-1918)*. Göttingen: Vandenhoeck & Rupprecht GmbH & Co. KG, 2011.
- Cartarius, Ulrich. *Deutschland im Ersten Weltkrieg, Texte und Dokumente 1914-1918. (Germany during World War I, texts and documents 1914-1918)*. München: Deutscher Taschenbuch Verlag GmbH & Co. KG, 1982.
- Chickering, Roger. *Imperial Germany and the Great War, 1914-1918*. Cambridge: Cambridge University Press, 1998.
- Citino, Robert M. *The German Way of War*. Lawrence: University Press of Kansas, 2005.
- Cron, Hermann. *Geschichte des Deutschen Heeres im Weltkriege 1914-1918 (History of the Imperial German Army during the World War 1914-18)*. Translated by C.F. Colton. Berlin: Siegismund, 1937.
- Fischer, Fritz. *Der Erste Weltkrieg und das deutsche Geschichtsbild. (The First World War and the German perception of history)*. Düsseldorf: Droste, 1977.
- Pershing, John J. *Final Report of Gen. John J. Pershing, Commander-In-Chief American Expeditionary Forces*. Washington: Government Printing Office, 1920.
- Gray, Colin S. *War, Peace and International Relations - An Introduction to Strategic History*. New York: Routledge, 2007.
- Grotelueschen, Mark E. *The AEF Way of War: the American Army and Combat in World War I*. Cambridge: Cambridge University Press, 2010.
- Hammerton, Sir J.A. *A Popular History of the Great War Volume V: The Year of the Victory 1918*. London: The Fleetway House, 1933.
- Hart, Liddell. *The Real War, 1914-1918*. Boston: Brown Little, 1930.
- Headquarters Department of the Army. *ADP 3-0 Unified Land Operations*. Washington D.C.: Headquarters Department of the Army, 2011.
- . *FM 3-0 Operations*. Washington D.C.: Headquarters Department of the Army, 2011.
- Henning, Friedrich-Wilhelm. *Wirtschafts- und Sozialgeschichte / 3. Das industrialisierte Deutschland 1914 bis 1976. (Economic and social history/ 3. The industrialized Germany 1914 to 1976)*. Paderborn: Schöningh, 1978.
- von Clausewitz, Carl. *On War*. Ed. and trans. Howard, Michael, and Peter Paret. New Jersey: Princeton University Press, 1989.
- Huegel, Arnulf. *Kriegsernährungswirtschaft Deutschlands während des Ersten und Zweiten Weltkrieges im Vergleich. (War food economics of Germany during the First and the Second World War in comparison)*. Konstanz: Hartung-Goerre-Verlag, 2003.

- Jung, Jakob. *Max von Gallwitz (1852-1937)*. Osnabrück: Biblio-Verlag, 1995.
- Kelly, Justin, and Michael J. Brennan. "The Leavenworth Heresy and the Perversion of Operational Art." *JFQ Issue 56*, 1st Quarter 2010: 109-116.
- Ludendorff, Erich. *Meine Kriegserinnerungen 1914-1918. (My war memories 1914-1918)*. Berlin: Mittler & Sohn, 1919.
- Lupfer, Timothy T. *Leavenworth Papers No.4 - The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*. Fort Leavenworth: Combat Studies Institute, 1981.
- Möllner, Hanns. "Gallwitz, Max Karl Wilhelm von", in: *Neue Deutsche Biographie 6*. Berlin: Duncker & Humblot, 1964.
- Sternberg, Leo. "Gott hämmert ein Volk." In *Kriegsdichtungen*, 40. ("*God pounds a nation*" in *war poems*). Berlin: Behr, 1916.
- Sturm, Reinhard. Vom Kaiserreich zur Republik 1918/19 in Informationen zur politischen Bildung (Heft 261), Website Bundeszentrale für politische Bildung (Heft 261), (*From the empire to a republic 1918/19 in information for political education (No. 261), website Federal central agency for political education*)
http://www.bpb.de/publikationen/Z4V2EB,2,0,Vom_Kaiserreich_zur_Republik_191819.html#art2 (accessed January 1, 2012).
- Tucker, Spencer, and Priscilla Mary Roberts. *World War I: A Student Encyclopedia*. Santa Barbara, CA: ABC-CLIO, Inc., 2006.
- Volckheim, Ernst. *Deutsche Kampfwagen greifen an! (German combat wagons attack!)*. Berlin: Mittler & Sohn, 1937.
- von Gallwitz, Max. *Erleben im Westen 1916-1918. (Experience in the west 1916-1918)*. Berlin: E.G. Mittler & Sohn, 1932.
- von Kuhl, Hermann. *Execution and Collapse of the German Offensive in 1918 Part II (Translated from the German)*. Washington D.C.: The Army War College, 1934.
- Deutsches Historisches Museum, Berlin (German Museum of History),
<http://www.dhm.de/lemo/html/wk1/kriegsverlauf/material/index.html> (accessed January 5, 2012).
- Zabecki, David T. *The German 1918 offensives: a case study in the operational level of war*. New York: Routledge, 2006.

ADDITIONAL REVIEWED SOURCES

- Echevarria, Antulio J. II. *After Clausewitz*. Lawrence: University Press of Kansas, 2000.
- Ferrell, Robert H. *America's Deadliest Battle*. Lawrence: University Press of Kansas, 2007.
- Gilbert, Martin. *To Conquer Hell*. New York: Henry Holt and Company, LLC, 2008.
- . *The Routledge Atlas of the First World War (Third Edition)*. Oxon: Routledge, 2008.
- Leinveber, Generalmajor a.D. *Mit Clausewitz durch die Rätsel und Fragen Irrungen und Wirrungen des Weltkrieges. (With Clausewitz through questions and aberrations of the world war)*. Leipzig: B. Behrs Verlag, 1926.

- Livesey, Anthony. *The Historical Atlas of World War I*. New York: Henry Holt & Co., 1994.
- Ludendorff, Erich. *The General Staff and its Problems*. Translated by F.A. Holt. New York: E.P. Dutton & Co., 1920.
- . *Kriegführung und Politik*.(Conduct of war and politics). Berlin: Mittler & Sohn, 1923.
- Moyer, Laurence V. *Victory must be ours*. New York: Hippocrene Books,1995.
- Sargent, Herbert Howland. *The Strategy on the Western Front (1914-1918)*. Chicago: A.C. McClurg & Co., 1920.
- Trask, David F. *The AEF and Coalition Warmaking, 1917-1918*. Lawrence: University Press of Kansas, 1993.
- Wynne, G.C. *If Germany Attacks*. London: Faber and Faber, 1940.